such as keyboard **11**, keypad **13**, touchpad **15**, pointing device **17**, headset **19**. Remote RFID device **111** is another peripheral device such as flash memory device **21**, RFID card **23** or other device.

[0038] Remote RFID device **109** includes an actuator **114** for generating user data, such as user data **102** in response to the actions of a user. Actuator **114** can include a button, joy stick, wheel, keypad, touch screen, keyboard, motion sensor (such as an on-chip gyrator or accelerometer or other position or motion sensing device) a photo emitter and photo sensor or other actuator along with other driver circuitry for generating user data **102** based on the motion of the remote RFID device **109** or other actions of the user.

[0039] Millimeter wave transceiver **121** is coupled to receive an RF signal **108** initiated by communications device **10** or **30**, such as a 60 GHz RF signal or other millimeter wave RF signal. In a similar fashion to a passive RFID tag, millimeter wave transceiver **121** converts energy from the RF signal **108** into a power signal for powering the millimeter wave transceiver **121** or all or some portion of the remote RFID device **109**. By the remote RFID device **109** deriving power, in while or in part, based on RF signal **108**, remote RFID device **109** can optionally be portable, small and light. Millimeter wave transceiver **121** conveys the user data **102** back to the communications device **10** or **30** by backscattering the RF signal **108** based on user data **102**.

[0040] Communications device **10** or **30** includes an interface module **79** that has a millimeter wave transceiver **29** for coupling to the remote RFID device **109**. In particular, millimeter wave transceiver **29** transmits RF signal **108** for powering the remote RFID device **109**. In operation, millimeter wave transceiver **29** also demodulates the backscattering of the RF signal **108** to recover the user data **102**. Interface module **79** can further include an optional protocol translation module not shown, for translating backscattered data received from the remote RFID device **109** from a protocol used in the short range communications **28** to a host protocol. In a further embodiment of the present invention, the protocol stack used in short range communications **28** includes the host protocol.

[0041] In a similar fashion, communication device **10** or **30** can communicate with remote RFID device **111** via its own millimeter wave transceiver **121** to power the remote RFID device **111** and receive user data **103** stored in memory **1 15**. In addition, RF signal **108** can be modulated by communication device **10** or **30** to store user data originated by communication device **10** or **30** in memory **115** of the remote RFID device **111**.

[0042] FIG. **5** is a pictorial diagram representation of a communication device and RFID terminal device in accordance with an embodiment of the present invention. In this mode of operation, the communication device **10** or **30** operates as an RFID tag to communicate with, and to optionally receive power from a remote RFID device such as RFID terminal device **31**. In accordance with the present invention, communications device **10** or **30** receives an RF signal from the RFID terminal device **31**. Backscattering of this RF signal by the communication device **10** or **30** conveys user data back to the RFID terminal device **31**. Further details regarding the interface between communications device **10** or **30** and RFID terminal device **31** will be described in conjunction with FIG. **6**.

[0043] In an embodiment of the present invention, the communication device **10** or **30** can operate itself as a user interface device. In this fashion, the keypad, touch screen, of other user interfaces functions of communication device **10** or **30** can generate user data, such as user data **102** that is communicated with RFID terminal device **31**. For example, RFID terminal **31** can be coupled to or incorporated in a processor-based system **33**, such as a personal computer, game console, cash register, home entertainment system or other processor-based system that operated based on user input. Communication device **10** or **30** can operate as a user interface device to generate user data **102** based on the action of the user to control or otherwise provide input in the form of user data **102** to the processor-based system **33**.

[0044] In an embodiment of the present invention, the communication device **10** or **30** can operate to store user data **103** that is communicated with RFID terminal device **31**. For example, communication device can operate as a key card, debit card or secure identification card and provide user data **103** as part of a secure transaction to open a door, make a purchase, or access an application of processor-based system **33**. In addition, user data **103** can be stored in communication device **10** or **30** to support a host of other applications used in conjunction with processor-based systems such as processor based-system **33**.

[0045] FIG. **6** is a block diagram representation of a communication device and RFID terminal device in accordance with an embodiment of the present invention. In accordance with this embodiment of the present invention, MMW transceiver **29** is included in RFID terminal **31** and millimeter wave transceiver **121** is included in communication device **10** or **30**.

[0046] Millimeter wave transceiver **121** is coupled to receive an RF signal **108** initiated by RFID terminal **31**, such as a 60 GHz RF signal or other millimeter wave RF signal. In a similar fashion to a passive RFID tag, millimeter wave transceiver **121** optionally converts energy from the RF signal **108** into a power signal for powering the millimeter wave transceiver **121** some portion of the communication device **10** or **30**. By the communication device **10** or **30** deriving power, in whole or in part, based on RF signal **108**, can optionally perform some functions such as key card access, credit or debit card transactions, user authentication, or operate as a remote control device or other user interface device without requiring battery power from the communication device **10** or **30**. In the alternative, communication device **10** or **30** can be independently powered via a battery or other power source. As described in conjunction with FIG. **4**, millimeter wave transceiver **121** conveys the user data **102** or **103** back to the millimeter wave transceiver **29** by backscattering the RF signal **108** based on user data **102** or **103**.

[0047] FIG. **7** is a schematic block diagram of an embodiment of an integrated circuit in accordance with the present invention. In particular, an RF integrated circuit (IC) **50** is shown that implements communication device **10** in conjunction with microphone **60**, keypad/keyboard **58**, memory **54**, speaker **62**, display **56**, camera **76**, antenna interface **52** and wireline port **64**. In addition, RF IC **50** includes a transceiver **73** with RF and baseband modules for formatting and modulating data into RF real-time data **26** and non-real-time data **24** and transmitting this data via an antenna interface **72** and an antenna. RF IC **50** includes a millimeter wave transceiver **77**, such as millimeter wave transceiver **29** for providing power to and communicating with a remote RFID device such as remote RFID devices **109** and **111**. Further millimeter wave transceiver **77** can be implemented as millimeter wave